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NUTRIMETER

Student's Guide

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NUTRIMETER

Student's Guide

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YOU CHOOSE

"Eat your spinach! Drink your milk! Clean your plate!" You may still get suggestions like these. But year by year you probably make more of your own food choices—and you take the consequences.

How well do you choose your food? Finding out how good your choices are is what this unit is all about. Spinach and milk, of course, are good food choices. So is almost any other food or beverage you can name—if you use it in combination with other foods to get the energy and nutrients you need. The big question is, "Do the foods you select provide the energy and nutrients you need?"

This unit will show you a way to check your diet. You will use a device called a NUTRIMETER, along with information from food labels and a publication, "Nutrition Labeling—Tools for Its Use."

NUTRITION LABELING

You have probably seen nutrition information panels on cereal boxes. Many other food packages, cans, and wrappers also tell about nutrients in foods. Nutrients are the substances in foods that help keep you healthy. Some nutrients listed on food labels are protein, vitamins A and C, several B-vitamins, and minerals, such as calcium and iron. The system of listing and showing amounts of nutrients on labels is called "Nutrition Labeling."

Activity 1.—Learn the language of nutrition labeling and the nutrimeter.

Some of the words on the nutrition information panels of food labels (and the NUTRIMETER) may be new to you. A sample label and definitions of some of the words used on the label are shown in the publication, "Nutrition Labeling—Tools for Its Use."

There are numbers on the label, too. Pay special attention to the ones that tell the number of "calories" and the "percentage of the U.S. RDA" for protein, vitamins, and minerals. Look carefully at the definitions of "calories" and "U.S. RDA." You need to know these definitions to use the NUTRIMETER. To see if you get the message, try checking the correct answers below.

1. All foods provide calories. (1) Yes _____ (2) No _____.
2. Calories are units of (1) energy _____ (2) fat _____.
3. The U.S. Recommended Daily Allowance for vitamin C is the amount of vitamin C that everybody in the United States needs each day to keep well. (1) Yes _____ (2) No _____. If no, what is wrong with the statement? _____

4. A percentage of the U.S. RDA for calcium of 50 on a label means that a serving of the size shown on the label provides one-half of the U.S. RDA for calcium. (1) Yes _____ (2) No _____. If you answered no, what is wrong with the statement? _____

5. To lose weight, you reduce the number of (1) grams of protein _____ (2) calories _____ (3) grams of fat _____ in your diet.

6. Suppose that during the day you ate a serving (of the size specified on the label) of canned tomatoes with 30 after vitamin A on the label and a serving of broccoli prepared from a package with 80 after vitamin A. Did your day's food meet the U.S. RDA for vitamin A? (1) Yes (2) No . If you answered no, what is wrong with the statement? _____

Activity 2.—Look for nutrition information on labels.

Now that you know a little about the kind of nutrition information on labels, look for labels on foods in the supermarket or at home that have nutrition information panels.

First, on a form like the one following, make a list of the foods you ate yesterday. Be sure to include everything you ate or drank (except water) at meals and between meals.

How many of the foods on your list came directly from cans or packages? Look at home and at the store for nutrition information on these cans and packages. You probably will not find nutrition information panels on all of them, because nutrition labeling is voluntary. For some foods that have no labels—such as fresh vegetables and fruits—nutrition information may be shown on a poster in the store.

Use the form on which you listed the foods you ate to record the nutrition information, if given, from the label (or a poster). Enter the serving size for which values are given, the number of calories in a serving, and the percentage of the U.S. RDA for various nutrients provided by a serving.

Activity 3.—Look for nutrition information about foods that don't have nutrition information on labels.

Table 1 of the publication, "Nutrition Information—Tools for Its Use," gives nutritive values for 900 foods. Values are given in a way similar to the nutrition information on labels. You can find in this table the number of calories and the percentage of the U.S. RDA for protein, vitamins, and minerals for most of the foods you eat.

You probably haven't found nutrition information at the store or at home for all of the foods on your list. Look up these foods in table 1. Foods are listed in table 1 by the four food groups shown on the NUTRIMETER.

On the form you prepared in Activity 2, enter the serving size shown in table 1, the number of calories, and the percentage of the U.S. RDA for each nutrient. Enter the number of the food item (from the extreme left of table 1) on your form.

You may not be able to find nutritive values for some of the foods either on food labels or in table 1. If so, you may be able to estimate the nutritive values from those given in the table for similar foods. For some food combinations made at home you may have to total the values for separate ingredients.

Activity 4.—List the foods you ate and the amount of each.

Now you are ready to start evaluating your food choices.

Make another list of the foods you ate yesterday on a form like the one used in Activities 2 and 3. This time, instead of entering the serving size shown on the label or in table 1, enter your best guess at the amount you ate of each food.

In your class or committee, you may want to do some measuring and weighing to learn to estimate amounts of food—for example, a cup or 1/2 cup, or 3 or 4 ounces of meat. Some foods you could use for experimenting are canned corn, applesauce, and luncheon meat.

Activity 5.—Check food choices for balance.

Check to see whether your day's food choices include some foods from each of the four food groups:

1. Milk, cheese, ice cream, and foods made with milk, such as cream soups and puddings.

2. Meat, poultry, fish, eggs, dry beans (for example, pork and beans or kidney beans), split peas, blackeye peas, soybeans, nuts, and peanut butter; and casseroles, stews, soups, and salads containing any of these foods.

[illegible]

Nutritive values from label. (Check.)	
Item number from table 1	
Serving size	
Calories (number)	
Percentage of U.S. RDA	
Protein
Vitamin A
Vitamin C
Thiamin
Riboflavin
Calcium
Iron

This image shows a full page of blank graph paper. The paper has a light cream or off-white color. A grid of thin, dark grey or black lines covers the entire surface, forming a pattern of small squares. The grid consists of approximately 20 columns and 20 rows, though some lines are slightly fainter than others, particularly towards the edges. There are no margins, text, or other markings on the page.

3. Vegetables and fruits, raw or cooked, and fruit and vegetable juices; and casseroles, stews, soups, salads, and pies or other desserts containing any fruit or vegetable.

4. Cereals, breads, and other bakery products. Try to include some that are whole grain or enriched.

One guide to good eating suggests that teenagers have—

- Four or more cups of milk as a beverage or in foods made from milk.

- Two or more servings of meat or meat alternates.

- Four or more servings of vegetables and fruits.

- Four or more servings of whole-grain and enriched breads and cereals.

- Other foods as needed to round out meals.

It's important to eat a variety of foods, to help assure that your diet will—

- provide recommended amounts of the nutrients shown on the NUTRIMETER, and

- provide other nutrients that are known to be necessary for health and well-being.

If your day's food has such variety, it has passed the first test. On to the next test...

Activity 6.—Check food choices using the NUTRIMETER.

Follow instructions on the NUTRIMETER to find the number of calories and the percentage of the U.S. RDA for the vitamins and minerals provided by the food you ate yesterday. The forms you filled out in Activities 2, 3, and 4 will be helpful to you in using the NUTRIMETER.

If the amount of a food you ate yesterday is the same as the serving size specified on the label or in table 1, use the calories and percentages from the form filled out in Activities 2 and 3 in moving the arrows on the NUTRIMETER.

If the amount of a food you ate is different from the serving size on the label or in table 1, you will have to do some figuring before you use the NUTRIMETER. For example, if you ate 1/2 cup of beans and the serving size shown

on the label is 1 cup, you must divide the number of calories and each of the percentages by 2 to find out how much to move the arrows. Usually you can do this figuring in your head. You may want to write the answers in the appropriate columns in the form you started in Activity 4. This form, when completed, will show you which foods provided the various nutrients in your day's diet.

When all of the foods for the day are accounted for on the NUTRIMETER, check the position of the arrows. If the seven arrows are at or to the right of the 100-percent mark, your diet meets the U.S. RDA for seven nutrients. If your weight is about normal, your calorie intake is probably OK, too.

As you learned in Activity 1, the U.S. RDA for most nutrients is the highest amount recommended for any of the sex-age categories for which nutrient allowances are set. This means that persons in some sex-age categories may use a percentage lower than 100 as a goal for certain nutrients. Calcium and riboflavin (a B-vitamin) are the exceptions for teenagers. A goal of slightly more than 100 percent is recommended for calcium and riboflavin for teenagers. The percentages teenagers should use as goals are shown on the NUTRIMETER in the column headed "Percent of U.S. RDA for you, 11-18."

On the average, a 16-year-old girl requires about 2,100 calories and a 16-year-old boy about 3,000 calories. More or less than the average may be required depending on build and amount of exercise.

The number of calories used each day in addition to those used to keep the body functioning depends on the kind of work and play a person does. The degree of physical exercise and the length of time spent at it determine the amount of energy used.

One way to find your daily calorie need is to keep an account of your activities and the time spent on each, as explained in USDA's publication, "Food and Your Weight" (Home and Garden Bulletin No. 74).

To get a good measure of the adequacy of your food choices you should repeat Activities 4, 5, and 6 for several consecutive days. Don't worry if your food provides a little less than the goal for a nutrient one day and then makes

it up the next day. If your diet is short in a nutrient for several days, however, you may need to make some changes in the foods you select.

Activity 7.—Modify food choices to provide recommended amounts of nutrients.

The knowledge that your diet is short in one or two nutrients does not help unless you do something to remedy the shortage. To do this, include in your diet more of the foods that are important sources of the needed nutrients. Some important sources of each nutrient are listed on the NUTRIMETER. More detailed lists are given in "Nutrition Labeling—Tools for Its Use."

Experiment with your list of foods eaten in a day to see whether other foods that you like could be added or substituted to build a better diet—one that includes foods from the four

food groups (Activity 5) and provides the food energy and nutrients you need (Activity 6).

Activity 8.—Look for food combinations that meet nutrient allowances.

The kind of meals and snacks you eat varies, depending on such factors as where you eat, how much time you have, and how much money you can spend for food. Think of some special situations that affect your food choices and plan some meals that fit those situations. Use the four-food-group check and the NUTRIMETER to see how they stack up in relation to your nutrient needs.

Some situations you might use are—

- A day at camp.
- A day of pick-up meals from the cupboard or refrigerator.
- A day with no breakfast and a candy bar for lunch—you fill in the rest.
- A day on the road, eating at drive-ins.

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